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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/907,260	07/17/2001	Paul D. Keppel	106E-0023CIP	7018
7590 04/22/2004 MILLER, EVERMAN, & BERNARD, PLLC 4701 Hedgemore Drive Suite 250 Charlotte, NC 28209			EXAMINER MAYO III, WILLIAM H	
			ART UNIT 2831	PAPER NUMBER

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/907,260

Applicant(s)

KEPPEL, PAUL D.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 is/are allowed.
- 6) ☐ Claim(s) 1-3 and 9-10 is/are rejected.
- 7) ☒ Claim(s) 4 and 11-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Divljakovic et al (Pat Num 6,087,836, herein referred to as Divljakovic). Divljakovic discloses an electrical conductor (Fig 5) for usage with coil wound device (Col 1, lines 5-9). Specifically, with respect to claim 1, Divljakovic discloses an electrical conductor (30') comprising a wire (34') abutting itself in a first curvilinear row (i.e. helically) that may be a bare wire (Col 3, lines 53-62, as shown in Fig 3) and coiled equal-distantly about a curvilinear centerline forming a curvilinear helix (Fig 5) and an conductor (32'),

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which may be insulated with insulation (Col 3, lines 53-62, as shown in Fig 3) and positioned along the curvilinear centerline and disposed within the bare wires (34', Fig 5). With respect to claim 3, Divljakovic discloses that the bare wire (32') makes up the conductor layer (20), which is grounded (see Fig 6). With respect to claim 9, Gray discloses a wire assembly (30') comprising a first conductor (32'), a bare second conductor (34') abutting itself and forming a first helix conductor layer (i.e. helically, Fig 5) around the first conductor (32'), which may be insulated with insulation (Col 3, lines 53-62, as shown in Fig 3) and positioned along the curvilinear centerline and disposed within the bare wires (34', Fig 5).

However, Divljakovic doesn't necessarily disclose the bare conductor is a plurality of conductors (claims 1 & 9), nor the plurality of bare conductors being three or more conductors (claims 2 & 10).

Gray teaches an electrical conductor (Figs 1-5) wherein the conductive layer is formed of a configuration well known in the art of cables (Col 1, lines 6-11). Specifically, with respect to claims 1-2 & 9-10, Gray teaches an electrical conductor (10) comprising a conductor layer (20) formed of a plurality of bare wires (28) in a first curvilinear row (i.e. helically) and coiled equal-distantly about a curvilinear centerline forming a curvilinear helix (Col 3, lines 29-32) and an conductor (16), which is insulated with insulation (18), is positioned along the curvilinear centerline and disposed within the bare wires (28, Fig 1), wherein the plurality of bare wires (28) comprises three or more bare wires (i.e. four, Fig 2).

With respect to claims 1-2 and 9-10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the conductor layer of Divljakovic to comprise a plurality of bare wires configuration as taught by Gray since it is well known in the art that conductor layers are commonly made of a plurality of conductor wires having different configurations such as braided or helically wrapped as taught by Gray and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. (*St. Regis Paper Co v. Bemis Co.*, 193 USPQ 8).

***Allowable Subject Matter***

4. Claims 5-8 are allowed.
5. Claims 4 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: This invention deals with an electrical conductor that is capable of applying at least eighty percent of voltage supplied to the conductor (claim 4). This invention also deals with an electrical conductor that further comprises a plurality of insulated wires juxtaposed in a second curvilinear row and coiled around the bare wires forming a curvilinear generally rectangular chamber around the bare wires (claim 5). This invention also deals with a wire assembly that further comprises a plurality of third

conductors being coiled around the plurality of second conductors (claim 11). The above stated claim limitations, in combination with other claim limitations, is not taught or suggested by the prior art of record. Claims 6-8 are depended upon allowed claim 5 and therefore are allowed.

### ***Response to Arguments***

7. Applicant's arguments filed February 23, 2004 have been fully considered but they are not persuasive. Specifically, the applicant argues the following:

- A) There is no need, or desire, to provide for more than one bare wire and therefore doesn't suggest or provide any motivation for having more than one bare wire.
- B) Gray teaches away from providing multiple bare wires abutting each other and therefore the combination of Gray and Divljokovic does not yield the subject invention as claimed.

With respect to argument A, the examiner respectfully traverses. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Divljokovic discloses an electrical conductor having all of the claimed limitations except the bare conductor being a

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plurality of conductors, nor the plurality of bare conductors being three or more conductors. Gray teaches an electrical conductor having a conductive layer being formed of a configuration well known in the art of cables (Col 1, lines 6-11) wherein the conductor layer is formed of a plurality of bare wires in a first curvilinear row (i.e. helically) and coiled equal-distantly about a curvilinear centerline forming a curvilinear helix (Col 3, lines 29-32) and an conductor, which is insulated with insulation and is positioned along the curvilinear centerline and disposed within the bare wires, herein the plurality of bare wires comprises three or more bare wires (i.e. four, Fig 2).

Therefore, based on the teaching of Gray, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the conductor layer of Divljakovic to comprise a plurality of bare wires configuration as taught by Gray since it is well known in the art that conductor layers are commonly made of a plurality of conductor wires having different configurations such as braided or helically wrapped as taught by Gray and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. (*St. Regis Paper Co v. Bemis Co.*, 193 USPQ 8).

With respect to argument B, the examiner respectfully traverses. While Gray clearly teaches against having the bare conductors abutting each other, the examiner has a duty to consider the reference for all that it teaches. Specifically, it has been held that patents are relevant for all they disclose. Specifically, "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art,

relevant for all they contain." In re Heck, 699 F.2d 1331, 1332- 33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968))." The courts have been consistent that a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including non-preferred embodiments. See Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361 , 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed"). Based on the above standard, and considering the Gray reference for all that it teaches, specifically, "an electrical conductor having a conductive layer being formed of a configuration well known in the art of cables (Col 1, lines 6-11) wherein the conductor layer is formed of a plurality of bare wires in a first curvilinear row (i.e. helically) and coiled equal-distantly about a curvilinear centerline forming a curvilinear helix (Col 3, lines 29-32) and an conductor, which is insulated with insulation and is positioned along the curvilinear centerline and disposed within the bare wires, herein the plurality of bare wires comprises three or more bare wires (i.e. four, Fig 2)", one of ordinary skill in the art, would be motivated to modify the conductor layer of Divljakovic to comprise a plurality of bare wires configuration as taught by Gray since it is well known in the art that conductor layers are commonly made of a plurality of conductor wires having different configurations such as braided or helically wrapped as



taught by Gray. In light of the above comments, the examiner respectfully submits, that the 35 USC 103(a) rejection is proper and just.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Communication***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WHM III  
April 15, 2004

William H. Mayo III  
Primary Examiner  
Art Unit 2831